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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/715,376  | 11/19/2003  | Jonathan Zanhong Sun | YOR920030332US1             | 5483                   |
| 21254 7590 09/03/2008<br>MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC<br>8321 OLD COURTHOUSE ROAD<br>SUITE 200<br>VIENNA, VA 22182-3817 |             |                      |                             |                        |
|   |             |                      | EXAMINER<br>NGUYEN, THINH T |                        |
|   |             |                      | ART UNIT<br>2818            | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>09/03/2008     | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/715,376

**Applicant(s)**

SUN ET AL.

**Examiner**

THINH T. NGUYEN

**Art Unit**

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15, 17-25, 30-34 and 37-42 is/are pending in the application.
- 4a) Of the above claim(s) 2-7, 9-11, 13-15, 17-25 and 30-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 8, 12, 37-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED OFFICE ACTION**

1. This is in response to Applicant Communication on May 27<sup>th</sup> 2008
2. Claims 1-15,17-25,30-34,37-42 are pending in the Application. Applicant has cancelled claims 16, 26-29 and 35-36 and withdraws claims 2-7,9-11,13-15,17-25,30-34 from consideration as directed to non-elected inventions.
3. The Examiner note that some claims in the present Application have the intended use limitation of a structure. note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus (explicitly disclosed or not) satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5        Claims 1, 8,12,37-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 of US patent 7,313,013 . Although the conflicting claims are not identical, they are not patentably distinct from each other. Claims 1-8,12,37-42 of the present invention is a similar version of the claimed invention in claims 1 of the above-identified U.S. Patents with similar intended scope.

With respect to claims 1,40 these claims are obvious over claim 1 of US patent 7,313,013 because claim 1 of US patent 7,313,013 has all the limitation of claim 1 and 40 of the present application except for the specific said plurality of magnetic layers includes a perpendicular magnetic anisotropy component,  $H_p$ , with a magnitude sufficient to at least substantially offset an easy-plane demagnetization effect  $4\pi M_g$ , where  $M_g$  is a saturation magnetization, such that said perpendicular magnetic anisotropy component,  $H_p$ , reduces an amount of spin current needed to rotate said magnetic moment of said free magnetic layer out of the film plane.

This limitation , however, is considered obvious since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With regard to claims 8, 12 , claim 8, 12 are obvious over claim 14 of US patent 7,313,013 because claim 14 of US patent 7,313,013 has all the limitations of claims 8,12.

With regard to claims 37-39 claim 37-39 are obvious over claim 17 of US patent 7,313,013 because claim 17 of US patent 7,313,013 has all the limitations of claim 37,38.

With regard to claim 41, claim 41 is obvious over claim 1 of US patent 7,313,013 for the rationale set forth in paragraph 3 of this Office Action ( i.e. the intended use limitation of a structure )

With regard to claim 42 , as set forth in the rejection of claim 1, Claim 1 of US patent 7,313,013 discloses all the invention except for the cylinder shape . This limitation however, is considered obvious because the Examiner take official notice that the cylinder shape for a magnetic stack is known at the time the invention was made . moreover, it only amount to regular engineering optimization of shape.

6. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

7. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

### **CONCLUSION**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose telephone number is 571-272-1790. The examiner can normally be reached on Monday-Friday 9:30am-6: 30pm.If attempts to reach the

examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached at 571-272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval [PAIR] system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Thinh T. Nguyen/**

**Patent Examiner**  
Art Unit 2818